

CLAIMS

1. A method of granting, to a user communications device,
access to a service provided by a plurality of service
communications devices, the method comprising the steps
5 of
initiating a first communications link between the user
communications device and a first one of the plurality of
service communications devices;
generating an access key code;
10 storing a first data item in a first storage means of the
user communications device, the first data item
indicating the access key code;
c h a r a c t e r i s e d i n that the access key code
is indicative of the user communications device and the
15 service; and the method further comprises the steps of
making the access key code available to at least a second
one of the plurality of service communications devices
via a communications network;
initiating a second communications link between the user
20 communications device and the second service
communications device; and
using the access key code to mutually authenticate the
user communications device and the second service
communications device.
25 2. A method according to claim 1, c h a r a c t e r -
i s e d i n that

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the user communications device and the plurality of service communications devices each comprise a Bluetooth communications unit;

the first and second communications links are Bluetooth communications links;

the access key code is a baseband link key; and

the step of generating an access key code is part of a Bluetooth pairing procedure.

3. A method according to claim 1,
characterised in that the user communications device is a mobile radio terminal.

4. A method according to claim 1,
characterised in that the first service communications device is a designated subscription communications device.

5. A method according to claim 1,
characterised in that the method further comprises the steps of

transmitting a service identification code from the first service communications device to the user communications device via the first communications link;

storing a second data item in the first storage means in relation to the access key code, the second data item indicating the service identification code; and

the step of using the access key code to mutually authenticate the user communications device and the second service communications device further comprises the steps of

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transmitting the service identification code from the second service communications device to the user communications device via the second communications link; and

5 retrieving, based on the service identification code, the access key code from the first storage means.

6. A method according to claim 1,
c h a r a c t e r i s e d i n that the method
further comprises the step of using the access key code
10 to generate an encryption key for encrypting the second communications link.

7. A method according to claim 1,
c h a r a c t e r i s e d i n that the step of
generating an access key code comprises the steps of
15 generating a first part of the access key code in the user communications device; generating a second part of the access key code in the first service communications device; transmitting the first part of the access key code from the user communications device to the first
20 service communications device; and transmitting the second part of the access key code from the first service communications device to the user communications device.

8. A method according to claim 1,
c h a r a c t e r i s e d i n that the step of
25 making the access key code available to at least a second one of the plurality of service communications devices via a communications network comprises the steps of

transmitting the access key code to the second service communications device; and

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storing a third data item in a second storage means of the second service communications device, the third data item indicating the access key code.

9. A method according to claim 1,

5 c h a r a c t e r i s e d i n that the step of making the access key code available to at least a second one of the plurality of service communications devices via a communications network comprises the step of
10 storing a fourth data item in a database, the fourth data item indicating the access key code; and

the step of using the access key code to mutually authenticate the user communications device and the second service communications device comprises the steps of

15 retrieving the access key code from the database; and

transmitting the retrieved access key code via the communications network to the second service communications device.

20 10. A communications system comprising a user communications device, a first and a second service communications device, the first and second service communications devices each providing a service;

the user communications device and the first and second service communications devices each including a
25 respective transmit/receive unit for transmitting and receiving data signals via respective communications links between the user communications device and a selected one of the first and second service communications devices;

30 a selected one of the user communications device and the first service communications device comprising first

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processing means adapted to generate at least a part of an access key code during an initialisation procedure of a first communications link between the user communications device and the first service communications device, the access key code being indicative of the user communications device and the service;

the user communications device including first storage means adapted to store a first data item indicating the access key code; and

second processing means adapted to retrieve the access key code from the first storage means and to use the retrieved access key code during an authentication procedure of a second communications link between the user communications device and the second service communications device;

the system including a communications network interconnecting the first and second service communications devices and adapted to make the access key code available to at least the second service communications device;

the second service communications device including third processing means adapted to receive the access key code via the communications network and to use the received access key code during the authentication procedure of the second communications link.

11. A communications system according to claim 10, characterised in that

the transmit/receive units of the user communications device and the first and second service communications devices each comprise a Bluetooth communications unit;

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the first and second communications links are Bluetooth communications links;

the access key code is a baseband link key; and

the initialisation procedure is a Bluetooth pairing procedure.

12. A communications system according to claim 10, characterised in that the user communications device is a mobile radio terminal.

10 13. A communications system according to claim 10, characterised in that the first service communications device is a designated subscription communications device.

15 14. A communications system according to claim 10, characterised in that

the first service communications device is adapted to transmit a service identification code to the user communications device via the first communications link;

20 the first storage means is adapted to store, in relation to the access key code, a second data item indicating the service identification code;

the second service communications device is adapted to transmit the service identification code to the user communications device via the second communications link during the authentication procedure; and

25 the second processing means is adapted to retrieve, based on the service identification code, the access key code from the first storage means.

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15. A communications system according to
claim 10, c h a r a c t e r i s e d i n
that a selected one of the second and third processing
means is adapted to generate an encryption key for
5 encrypting the second communications link on the basis of
the access key code.

16. A communications system according to
claim 10, c h a r a c t e r i s e d i n
that the second service communications device further
10 comprises second storage means adapted to store a third
data item indicating the access key code.

17. A communications system according to
claim 10, c h a r a c t e r i s e d i n
that the system further comprises a third storage means
15 connected to the communications network and adapted to
store a fourth data item indicating the access key code;
and the third processing means is adapted to retrieve the
access key code from the third storage means via the
communications network.

20 18. A user communications device comprising

a first transmit/receive unit for transmitting data
signals to and receiving data signals from selected ones
of a plurality of service communications devices
providing a service;

25 first storage means adapted to store a first data item
indicating an access key code generated during an
initialisation procedure of a first communications link
between the user communications device and a first one of
the plurality of service communications devices, the
30 access key code being indicative of the user
communications device and the service;

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first processing means adapted to retrieve the access key code from the first storage means and to use the retrieved access key code during an authentication procedure of a second communications link between the user communications device and a second one of the plurality of service communications devices.

19. A user communications device according to claim 18, characterised in that

the first transmit/receive unit comprises a Bluetooth communications unit;

the first and second communications links are Bluetooth communications links;

the access key code is a baseband link key; and

the initialisation procedure is a Bluetooth pairing procedure.

20. A user communications device according to claim 18, characterised in that the user communications device is a mobile radio terminal.

21. A user communications device according to claim 18, characterised in that

the first transmit/receive unit is adapted to receive a service identification code from the first service communications device via the first communications link;

the first storage means is adapted to store, in relation to the access key code, a second data item indicating the service identification code; and

the first transmit/receive unit is further adapted to receive, during the authentication procedure, the service identification code from the second service communications device via the second communications link;
5 and

the first processing means is adapted to retrieve, based on the service identification code, the access key code from the first storage means.

22. A user communications device according to
10 claim 18, characterised in that the first processing means is adapted to generate an encryption key for encrypting the second communications link on the basis of the access key code.

23. A user communications device according to
15 claim 18, characterised in that the user communications device further comprises second processing means adapted to generate at least a part of the access key code.

24. A communications system comprising a first and a
20 second service communications device each providing a service;

the first service communications device including

a first transmit/receive unit for transmitting data signals to and receiving data signals from a user
25 communications device via a first communications link;

first processing means adapted to perform an initialisation procedure of the first communications link, the initialisation procedure including the generation of an access key code indicative of the user
30 communications device and the service;

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the system including a communications network interconnecting the first and second service communications devices and adapted to make the access key code available to at least the second service communications device;

the second service communications device including

a second transmit/receive unit for transmitting data signals to and receiving data signals from the user communications device via a second communications link;

second processing means adapted to receive the access key code via the communications network and to use the received access key code during an authentication procedure of the second communications link.

25. A communications system according to claim 24, characterised in that the first processing means is adapted to generate at least a part of the access key code.

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